MK-170 SERIES

TILE SAW
OWNER'S MANUAL &
OPERATING INSTRUCTIONS

CAUTION:
Read all safety and operating instructions before using this equipment

Enter the Serial Number of your new saw in the space below. The Serial Number is located on the rear of the Cutting Head.

SERIAL NUMBER:

NOTE:
For your (1) one year warranty to be effective, complete the warranty card (including the Serial Number and mail it in as soon as possible.

INTRODUCTION

We at MK Diamond want to congratulate you on selecting the MK-170 Tile Saw. We are certain that you will be pleased with your purchase. MK Diamond takes pride in producing the finest products in the industry.

Operated correctly, your MK-170 should provide you with years of quality service. In order to help you, we have included this manual. This owners manual contains information necessary to operate and maintain your MK-170 safely and correctly. Please take a few minutes to familiarize yourself with the MK-170 by reading and reviewing this manual.

If you should have questions concerning your MK-170, please feel free to call our friendly customer service department at: 800 421-5830

Regards,

MK Diamond

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Manual Part No. 157243 Revision No. 02/02

SAFETY

Read and follow all safety, operating and maintenance instructions. Failure to read and follow these instructions could result in injury or death to you or others. Failure to read and follow these instructions could also result in damage and/or reduced equipment life.

SAFETY MESSAGES:

Safety messages inform the user about potential hazards that could lead to injury, death and/or equipment damage. Each safety message will be preceded by one of the following (3) three words that identify the severity of the message.

⚠DANGER
Not following instructions **WILL** lead to **DEATH** or **SERIOUS INJURY**

⚠WARNING
Not following instructions **COULD** lead to **DEATH** or **SERIOUS INJURY**

⚠CAUTION
Not following instructions **CAN** lead to injury

DAMAGE PREVENTION AND INFORMATION MESSAGES:

A Damage Prevention Message is to inform the user of important information and/or instructions that could lead to equipment or other property damage if not followed. Information Messages convey information that pertains to the equipment being used. Each message will be preceded by the word NOTE, as in the example below.

NOTE:
Equipment and/or property damage may result if these instructions are not followed.

GENERAL SAFETY PRECAUTIONS AND HAZARD SYMBOLS:

In order to prevent injury, the following safety precautions and symbols should be followed at all times!

Safety Precautions:

KEEP GUARDS IN PLACE.

In order to prevent injury, keep guards in place and in working order at all times.

REMOVE ADJUSTING KEYS AND WRENCHES.
Form a habit of checking to see that keys and adjusting wrenches are removed from the power tool before it is turned on.

KEEP WORK AREA CLEAN.
Cluttered work areas and benches invite accidents.

DO NOT USE IN DANGEROUS ENVIRONMENTS.
Do not use power tools in damp or wet locations nor expose them to rain. Always keep the work area well lighted.

KEEP CHILDREN AWAY.
All visitors and children should be kept a safe distance from work area.

MAKE THE WORKSHOP KID PROOF.
Make the workshops kid proof by using padlocks, master switches or by removing starter keys.

DO NOT FORCE THE TOOL.
A power tool will do a job better and safer operating at the rate for which it was designed.

USE THE RIGHT TOOL.
Do not force a tool or an attachment, to do a job that it was not designed to do.

SAFETY

USE THE PROPER EXTENSION CORD.

If using an extension cord make sure it is in good condition first. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage that will result in a loss of power and overheating. TABLE 1, Page 8 shows the correct AWG size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

WEAR PROPER APPAREL.

Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry that may be caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.

ALWAYS USE SAFETY GLASSES.

Safety glasses should always be worn when working around power tools. In addition, a face, dust mask or respirator should be worn if a cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses and may not prevent eye injury-they are NOT safety glasses.

SECURE WORK.

Clamps or a vise should be used to hold work whenever practical. Keeping your hands free to operate a power tool is safer.

DO NOT OVERREACH.

Keep proper footing and balance at all times by not overreaching.

MAINTAIN TOOLS WITH CARE.

Keep tools clean for the best and safest performance. Always follow maintenance instructions for lubricating, and when changing accessories.

DISCONNECT TOOLS.

Power tools should always be disconnected before servicing or when changing accessories, such as blades, bits, cutters, and the like.

REDUCE THE RISK OF UNINTENTIONAL STARTING.

Make sure the ON/OFF Switch is in the OFF position before plugging in a power tool.

USE RECOMMENDED ACCESSORIES.

Consult the owner's manual for recommended accessories. Using improper accessories may increase the risk of personal or by-stander injury.

NEVER STAND ON THE TOOL.

Serious injury could occur if a power tool is tipped, or if a cutting tool is unintentionally contacted.

CHECK FOR DAMAGED PARTS.

Before using a power tool, check for damaged parts. A guard or any other part that is damaged should be carefully checked to determine it would operate properly and perform its intended function. Always check moving parts for proper alignment or binding. Check for broken parts and mountings and all other conditions that may affect the operation of the power tool. A guard, or any damaged part, should be properly repaired or replaced.

DIRECTION OF FEED.

Always feed work into a blade or cutter against the direction of rotation. A blade or cutter should always be installed such that rotation is in the direction of the arrow imprinted on the side of the blade or cutter.

NEVER LEAVE A TOOL RUNNING UNATTENDED – TURN POWER OFF.

Do not leave a tool until it comes to a complete stop. Always turn a power tool OFF when leaving the work area, or, when a cut is finished.

SAFETY

Hazard Symbols:

ELECTRICAL SHOCK!

Never touch electrical wires or components while the motor is running. Exposed, frayed or worn electrical motor wiring can be sources of electrical shock that could cause severe injury or burns.

ACCIDENTAL STARTS!

Before plugging the equipment into an electrical outlet, be sure the ON/OFF Switch is in the OFF position to prevent accidental starting. Unplug the power tool before performing any service operation.

ROTATING OR MOVING PARTS!

Keep hands, feet, hair, and clothing away from all moving parts to prevent injury. Never operate a power tool with covers, shrouds, or guards removed.

⚠WARNING

Sawing and drilling generates dust. Excessive airborne particles may cause irritation to eyes, skin and respiratory tract. To avoid breathing impairment, always employ dust controls and protection suitable to the material being sawed or drilled; See OSHA (29 CFR Part 1910.1200). Diamond Blades improperly used are dangerous. Comply with American National Standards Institute Safety Code, B7.1 and, Occupational Safety and Health Act covering Speed, Safety Guards, Flanges, Mounting Procedures, General Operating Rules, Handling, Storage and General Machine Conditions.

CALIFORNIA PROPOSITION 65 MESSAGE:

⚠WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contain chemicals known [to the State of California] to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead, from lead-based paints
- Crystalline silica, from bricks and cement and other masonry products and
- Arsenic and chromium, from chemically treated lumber

For further information, consult the following sources:

http://www.osha-slc.gov/sltc/silicarystalline/index.html
http://www.oehha.org/prop65/out_of_date/6022kLstA.html

Your risk from these exposures varies depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

SAFETY

ELECTRICAL REQUIREMENTS AND GROUNDING INSTRUCTIONS:

In order to prevent potential electrical shock and injury, the following electrical safety precautions and symbols should be followed at all times!

⚠WARNING

In case of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

- Do not modify the plug provided – if it will not fit the outlet; have the proper outlet installed by a qualified electrician
- Improper connections of the equipment-grounding conductor can result in a risk of electric shock. The equipment-grounding conductor is the insulated conductor that has an outer surface that is green, with or without yellow stripes. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal
- Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded
- Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug
- Repair or replace a damaged or worn cord immediately

⚠WARNING

This tool is intended for use on a circuit that has an outlet that looks like the one shown in Sketch A of Figure 1. The tool has a grounding plug that looks like the plug illustrated in Sketch A of FIGURE 1. A temporary adapter, which looks like the adapter illustrated in sketches B and C, may be used to connect this plug to a 2-pole receptacle as shown in Sketch B, if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, and the like, extending from the adapter, must be connected to a permanent ground such as a properly grounded outlet box.

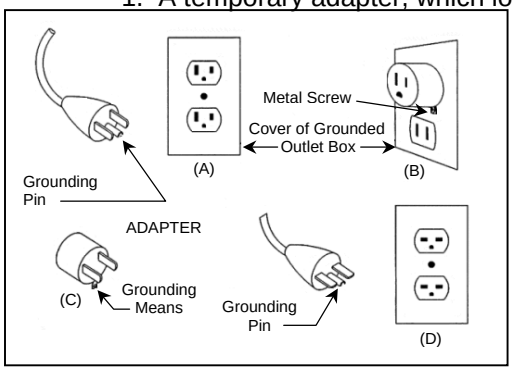


FIGURE 1

NOTE: Use of a temporary adapter is not permitted in Canada.

⚠WARNING

To reduce the risk of electrocution, keep all connections dry and off the ground.

A Ground Fault Circuit Interrupter (GFCI) should be provided on the circuit(s) or outlet(s) to be used for the Saw. Receptacles are available having built-in GFCI protections and may be used for this measure of safety.

When using an extension cord, the GFCI should be installed closest to the power source, followed by the extension cord and lastly, the saw.

⚠WARNING

To avoid the possibility of the appliance plug or receptacle getting wet, position the saw to one side of a wall mounted receptacle. This will prevent water from dripping onto the receptacle or plug. A "drip loop," shown in FIGURE 2, should be arranged by the user to properly position the power cord relative to the power source.

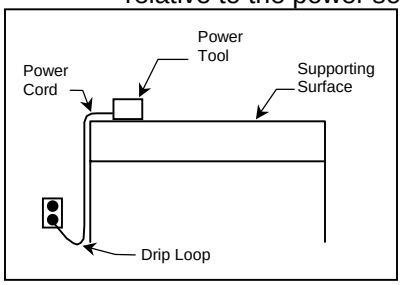


FIGURE 2

The "drip loop" is that part of the cord below the level of the receptacle, or the connector, if an extension cord is used. This method of positioning the cord prevents the travel of water along the power cord and coming in contact with the receptacle.

If the plug or receptacle gets wet, DO NOT unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the tool. Then unplug and examine for presence of water in the receptacle.

⚠WARNING

Use only extensions cords that are intended for outdoor use. These extension cords are identified by a marking "Acceptable for use with outdoor appliances; store indoors while not in use." Use only extension cords having an electrical rating not less than the rating of the product. Do not use damaged extension cords. Examine extension cords before using and replace if damaged. Do not abuse extension cords and do not yank on any cord to disconnect. Keep cords away from heat and sharp edges. Always disconnect the extension cord from the receptacle before disconnection the product form the extension cord.

To reduce the risk of electrocution, keep all connections dry and off the ground. Do not touch the plug with wet hands.

⚠WARNING

Use of undersize extension cords result in low voltage to the motor that can result in motor burnout and premature failure. MK Diamond warns that equipment returned to us showing signs of being run in a low voltage condition, through the use of undersized extension cords will be repaired or replaced totally at the customers' expense. There will be no warranty claim.

To choose the proper extension cord,

- Locate the length of extension cord needed in TABLE 1 below.
- Once the proper length is found, move down the column to obtain the correct AWG size required for that length of extension cord.

Extension Cord Minimum Gage for Length

Volts	Total Length of Cord in Feet			
120V	**25 ft.**	**50 ft.**	**100 ft**	**150 ft.**
	AWG	AWG	AWG	AWG
	18	16	16	14

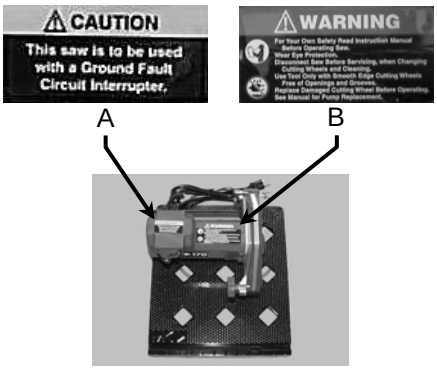
TABLE 1

SAFETY

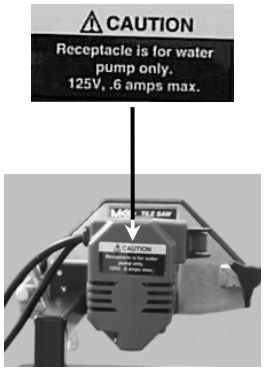
SAFETY LABEL LOCATIONS:

Safety labels are located according to Figures 1 and 6 below. The labels contain important safety information. Please read the information contained on each safety label. These labels are considered a permanent part of your saw. If a label comes off or becomes hard to read, contact MK Diamond or your dealer for a replacement.

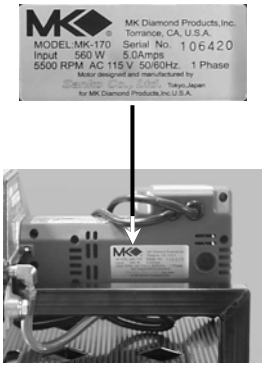
Item	Location	Description	Part No.
1A.	Motor Top	Caution Use With a GFCI	155678
1B.	Motor Top	Warning General Safety Warnings	155806
2.	Motor End	Caution Water Pump Receptacle	154822
3.	Motor Side	Motor Specifications	N/A
4.	Blade Guard	Serial Number	157249-02
5.	Pump Side	Pump Specifications	N/A
6.	Pump End	Warning Pump Warning	N/A



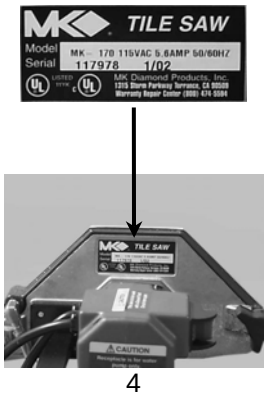
1



2



3



4

5

WARNING
TO REDUCE RISK OF ELECTRIC SHOCK CONNECT ONLY TO A PROPERLY GROUNDED, GROUNDING TYPE RECEPTICLE. THIS PUMP HAS NOT BEEN INVESTIGATED FOR USE IN SWIMMING POOL AREAS. PROTECTION D'IMPEDANCE INHERENTE.
994369
6

TILE SAW SPECIFIC WARNINGS:

⚠WARNING

Wear eye protection.
Use splash hood for every operation for which it can be used.
Disconnect saw before servicing, when changing cutting blades, and cleaning.
Use tool only with smooth edge cutting blades free of openings and grooves.
Replace damaged cutting blade before operating.

PRODUCT SPECIFICATIONS:

The MK-170 is a versatile Tile Saw. Operated and used according to this manual, the MK-170 will provide years of dependable service.

General Description:
The MK-170 Tile Saw is engineered as a tabletop or stand mounted wet tile saw. The saw includes a powerful 115v direct drive AC motor. The saw is capable of cutting tile up to twelve (12) inches in length and one and three quarter (1-3/4) inches thick in one pass.

Motor Specifications:
Motor specifications for the MK-170 are listed in Table 2 below.

Voltage	115 v
Motor Amperage	5.0 a
Frequency	50/60 Hz
RPM	5500 rpm
Horse Power	1/3 hp
Weight	15 lbs.

Table 2

Blade Capacity:
The MK-170 uses a seven (7) inch (178 mm) diameter, wet cutting continuous rim, MK Diamond blade with a five-eighths (5/8) inch (15.875 mm) arbor.

Tile Types:
The MK-170 can cut a variety of tile types including Porcelain, Terracotta, Marble, Quarry and Slate, or almost any other non-ferrous material.

NOTE:
The MK-170 is not designed to cut plastic or ferrous (metals) material.

UNPACKING, TRANSPORT, UNIVERSAL STAND and ASSEMBLY

UNPACKING:

Your MK-170 has been shipped from the factory thoroughly inspected. Only minimal assembly is required.

⚠CAUTION Use proper lifting techniques when lifting the MK-170.

If not done, remove the MK-170, accessory box from the carton.

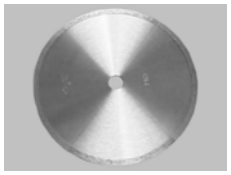
CONTENTS:

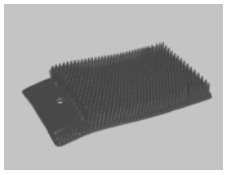
In your container, you will find one (1) MK-170 cutting surface, one (1) MK-170 water pan, (1) adjustable cutting guide, (1) 7-inch wet cutting continuous rim diamond blade, one (1) splash guard, one (1) splash guard washer, one (1) splash guard wing nut, one (1) electric water pump, one (1) pump discharge fitting, one (1) blade wrench one (1) shaft wrench, one (1) owners manual, one (1) pump manual and one (1) warranty card.

MK-170 Cutting Surface

MK-170 Water Pan

Adjustable Cutting Guide

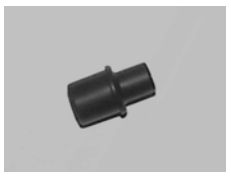

Diamond Blade


Splash Guard

Splash Guard Washer

Splash Guard Wing nut

Electric Water Pump

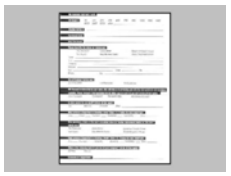

Pump Discharge Fitting

Blade Nut Wrench

Shaft Wrench

Owners Manual

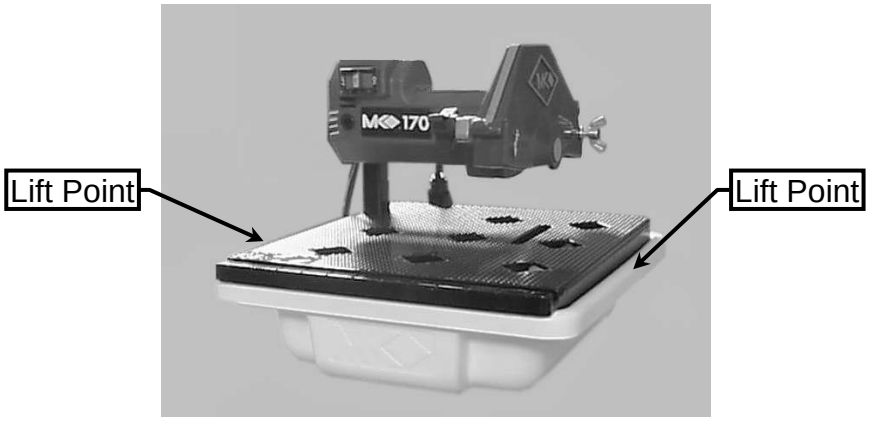
Pump Manual


Warranty Card

TRANSPORT:

1. The MK-170 weighs approximately fifteen (15) pounds for ease of transport.
2. Never transport the MK-170 with water in the Water Pan.

To lift the saw, grasp the Water Pan on either side and lift.

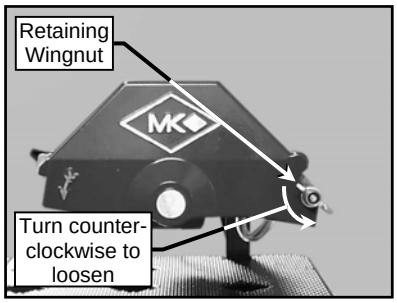


ASSEMBLY:

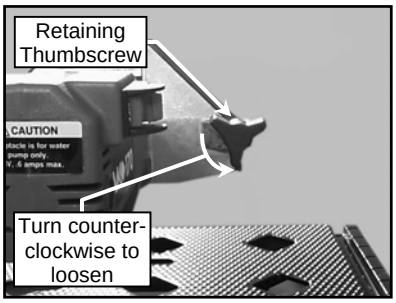
Follow the assembly instructions to prepare your MK-170 for operation.

1. Diamond Blade Installation:

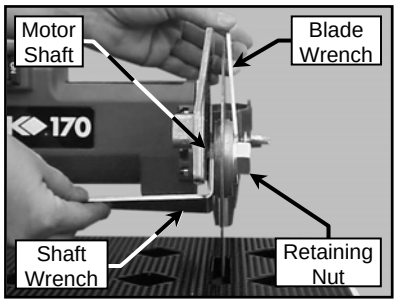
NOTE: When installing the Retaining Screw, do not “cross-thread" and DO NOT over tighten the screw.



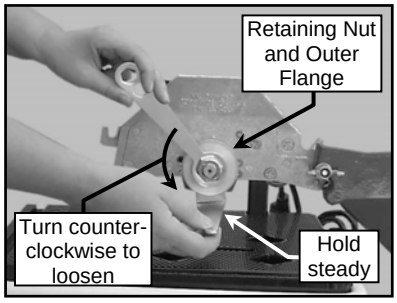
(A)
Loosen the Blade Guard Pivot Point Retaining Wingnut



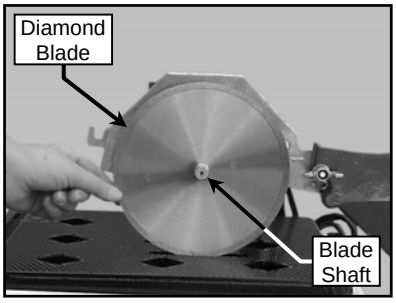
(B)
Loosen the Blade Guard Retaining Thumbscrew



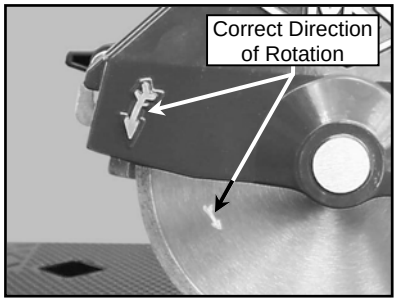
(C)
Open the Blade Guard and place the Shaft Wrench on the Motor Shaft and the Blade Wrench on the Blade Retaining Nut



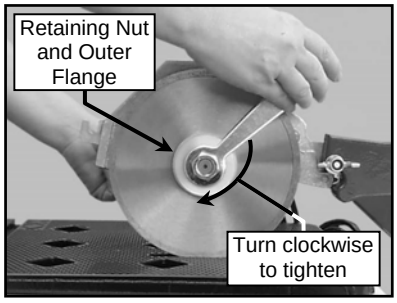
(D)
Remove the Blade Retaining Nut and the Outer Flange



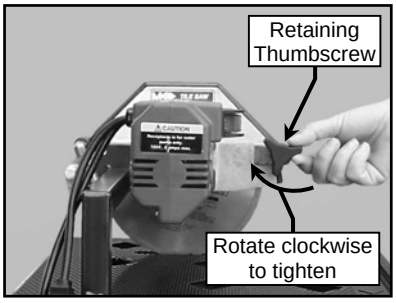
(E)
Install Diamond Blade onto Blade Shaft



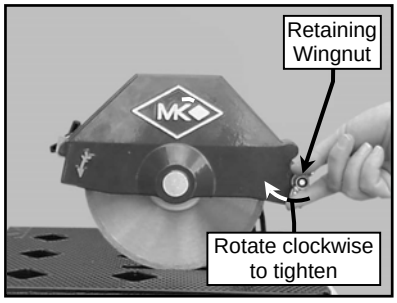
(F)
Verify the Directional Arrow of the Blade faces outward and matches the Directional Arrow of the Blade Guard



(G)
Install the Retaining Nut and Outer Flange, place the Shaft Wrench and Blade Wrench as shown in Step C and Tighten the Retaining Nut



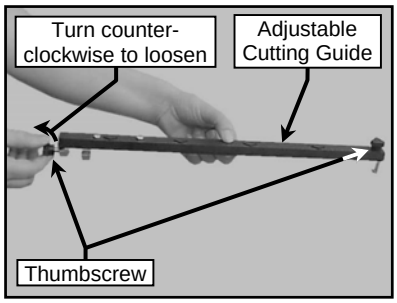
(H)
Close the Blade Guard and tighten the Blade Guard Retaining Thumbscrew



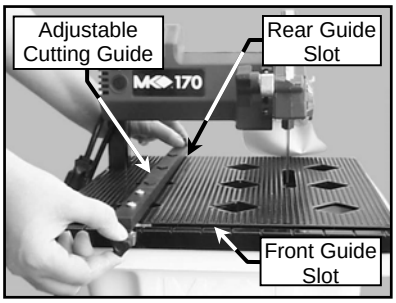
(I)
Tighten the Blade Guard Pivot Point Retaining Wingnut

2. Adjustable Cutting Guide Installation:

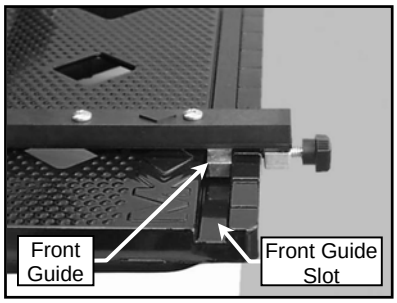
NOTE: When installing the Adjustable Cutting Guide, verify the guide is parallel to the Diamond Blade. If alignment of the Adjustable Cutting Guide is required, see Step 2 in the Adjustment and Operation Section of this manual.



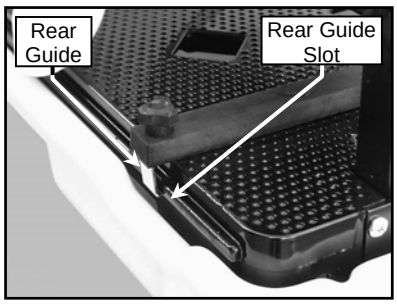
(A)
Loosen the Adjustable Cutting Guide retaining thumbscrews



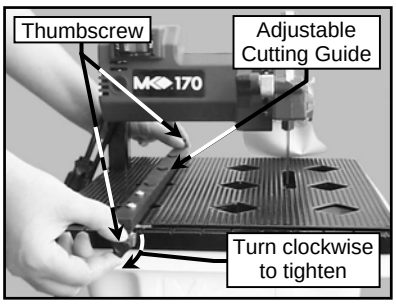
(B)
Place the Adjustable Cutting Guide onto the Cutting Table with the Front Guide into the front Guide Slot and the Rear Guide in the rear Guide Slot



(C)
Verify the Front Guide is properly seated in the front Guide Slot

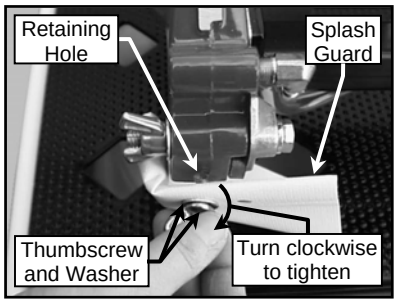


(D)
Verify the Rear Guide is properly seated under the rear Guide Slot



(E)
Tighten the Adjustable Cutting Guide retaining thumbscrews

3. Splash Guard Installation:



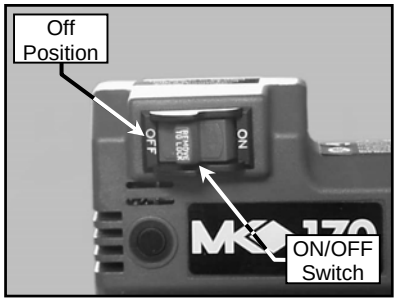
(A)
Install the Thumbscrew through the Washer and Splashguard then align to the hole found on back of the Blade Guard and tighten

SETUP, ADJUSTMENT and OPERATION

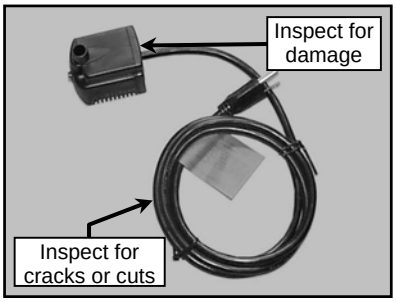
SETUP:

1. Pre-start Inspection:

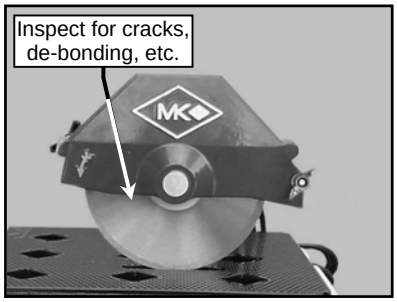
Prior to beginning work, a pre-start inspection of the saw should be preformed.



(A)
Ensure the ON/OFF Switch is in the OFF position



(B)
Inspect the Pump Assembly for damage – ensure the cord is free of cracks or cuts



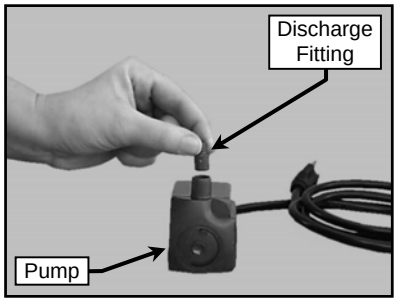
(C)
Inspect the Diamond Blade for damage – verify the blade is correct for the material being cut

(D)
Inspect the MK-170 for damage – ensure the cord is free of cracks or cuts

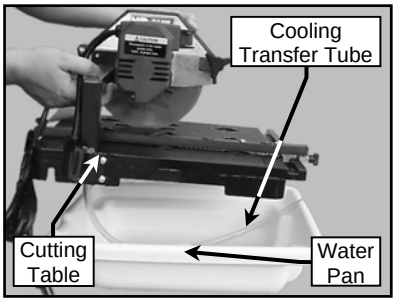
2. Water Pump Preparation:

⚠WARNING 1. To prevent the possibility electrical shock, the MK-170 MUST be de-energized when preparing the Water Pump for operation.

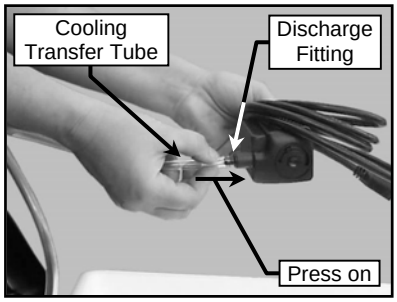
2. To prevent the possibility of electrical shock, use only MK Diamond qualified replacement parts



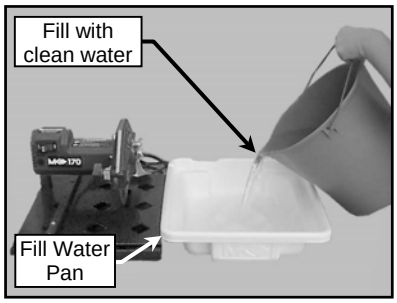
(A)
Install Water Pump Discharge Fitting



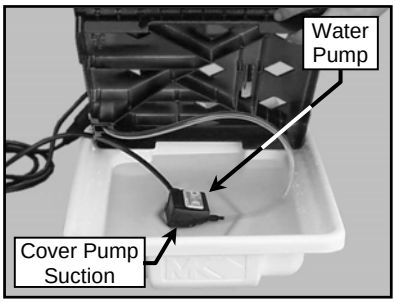
(B)
Remove the Cutting Table from the Water Pan (Note the Cooling Transfer Tube)



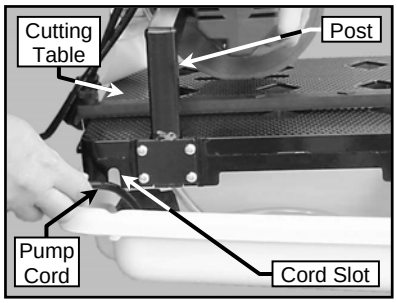
(C)
Press the end of the Cooling Transfer Tube onto the Water Pump Discharge Fitting



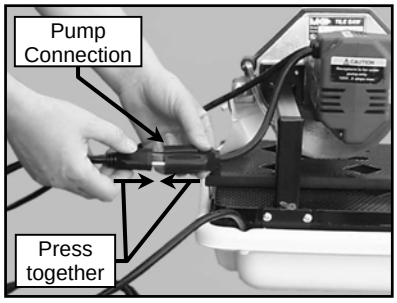
(D)
Fill the Water Pan with clean water (this should be done periodically during cutting)



(E)
Place the Water Pump in the Water Pan–ensure the pump suction is covered



(F)
Install the Cutting Table; ensure the pump power cord is seated in the slot behind the Post



(F)
Connect the Water Pump power cord to the connection found on the back of the motor

3. MK-170 Setup for Operation:

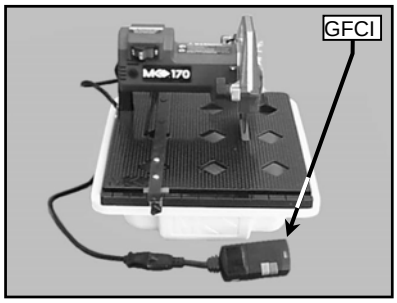
⚠CAUTION 1. Before connecting the MK-170 to a power supply, be sure the voltage, cycle and phase meet the requirements of TABLE 3 below.

VOLTAGE – 115V	CYCLE – 60 Hz	PHASE – 1 Phase

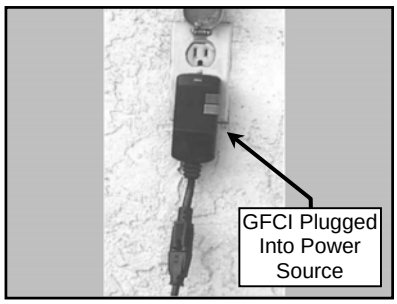
TABLE 3

2. If using an extension cord, make sure the length and wire gauge correspond to the requirements listed in TABLE 1 on page 8. An extension cord that is too small in wire gauge (diameter), or too long in length, will cause the motor to overheat and could cause premature failure.
3. Use an approved Ground Fault Circuit Interrupter (GFCI)
4. Do not cover the motor vents as this could lead to motor overheating.

NOTE: In order to avoid breaker tripping, a 20-amp circuit breaker should be used.



(A)
Plug MK-170 into the GFCI (A GFCI should always be used when operating the MK-170)



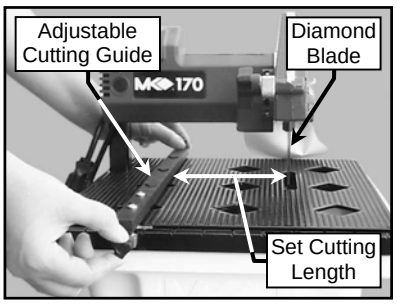
(B)
Plug the GFCI into the Power source

SETUP, ADJUSTMENT and OPERATION

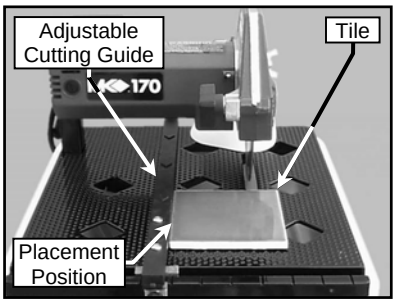
ADJUSTMENT and OPERATION:

1. Cutting Tile:

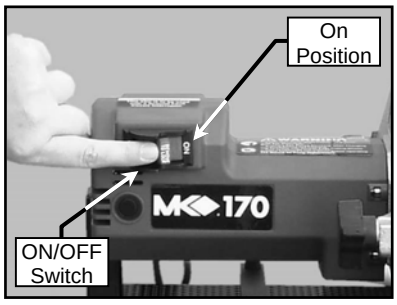
⚠CAUTION DO NOT FORCE THE TOOL. It will do the job better and safer at the rate for which it was designed.



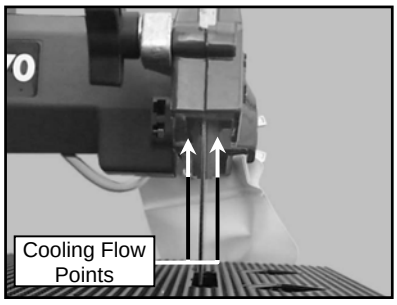
(A)
Position the Adjustable Cutting Guide to desired cut length as measured from the Blade



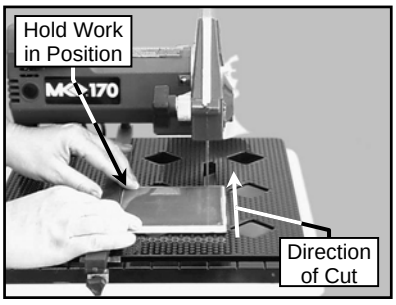
(B)
Place the tile against the Adjustable Cutting Guide



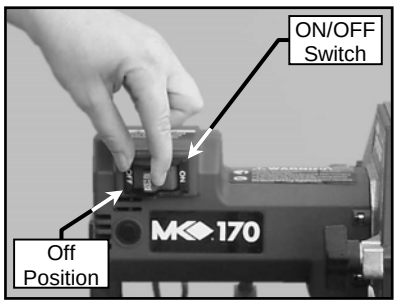
(C)
Place the ON/OFF Switch in the ON position



(D)
Verify cooling flow on both sides of the blade (adjust flow if necessary - See Maintenance Section)



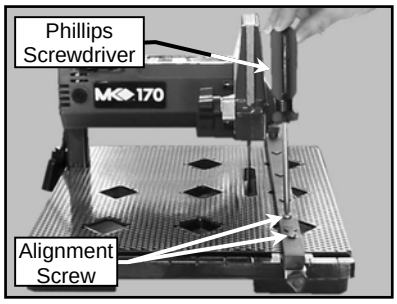
(E)
Push the Tile into the Blade in a smooth even motion to perform a cut



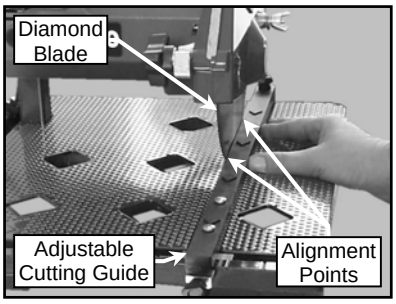
(F)
Turn the motor OFF when work is complete

2. Adjustable Cutting Guide Alignment:

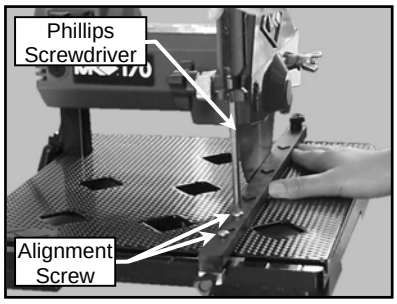
If during the cutting operation it is found that the Adjustable Cutting Guide is not aligned to the Blade, perform the following operation.



(A)
Loosen the Adjustable Cutting Guide Alignment Screws



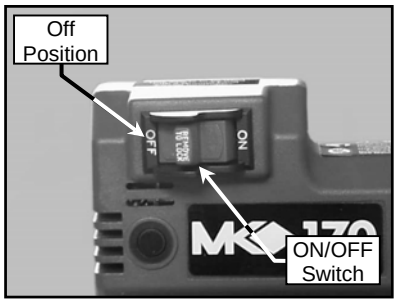
(B)
Gently align the Adjustable Cutting Guide to the Blade



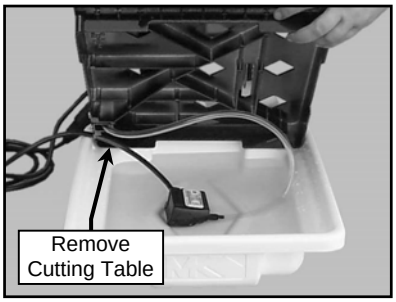
(C)
Tighten the Adjustable Cutting Guide Alignment Screws

3. Cleanup:

NOTE: Dispose of wastewater in accordance with applicable Federal, State and Local laws.

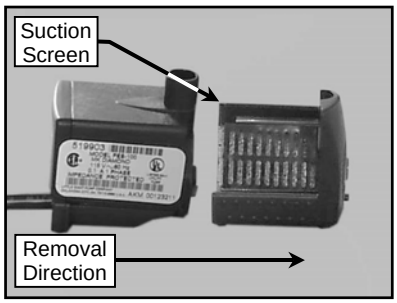


(A)
Ensure the ON/OFF Switch is in the OFF position

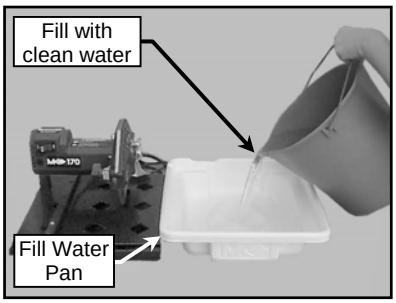


(B)
Remove the Cutting Table from the Water Pan

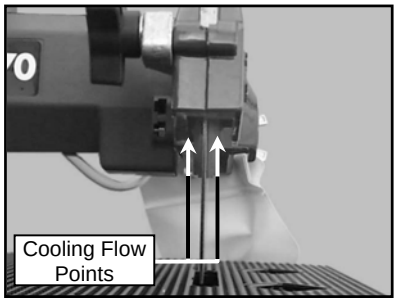
(C)
Dispose the contents of the Water Pan



(D)
Remove the pump Suction Screen and clean the Water Pump of all debris

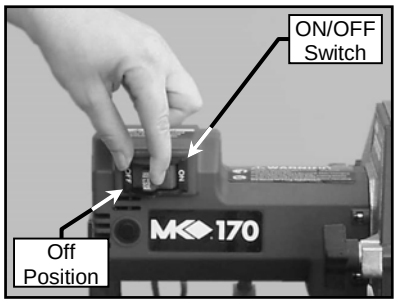


(E)
Fill the Water Pan with clean water

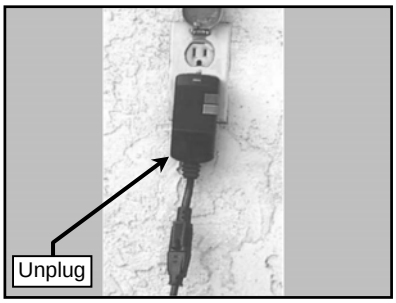


(F)
Run the MK-170 until clear water is seen at the blade cooling ports (Approx. 1 minute)

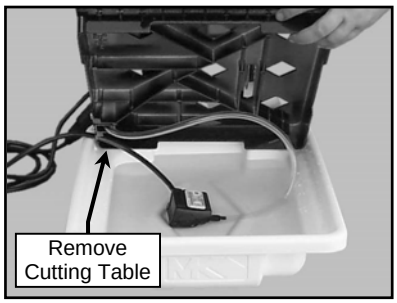
⚠CAUTION Ensure the saw is disconnected before completing the remainder of the cleanup process.



(G)
Turn the motor OFF when work is complete

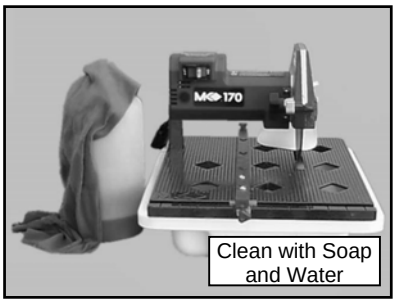


(H)
Unplug the GFCI from the Power source

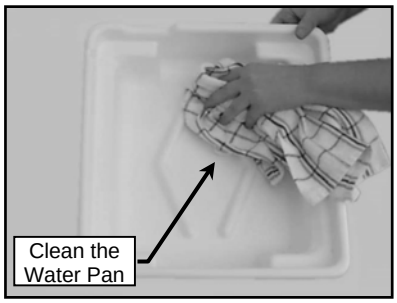


(I)
Remove the Cutting Table from the Water Pan

(J)
Dispose the contents of the Water Pan



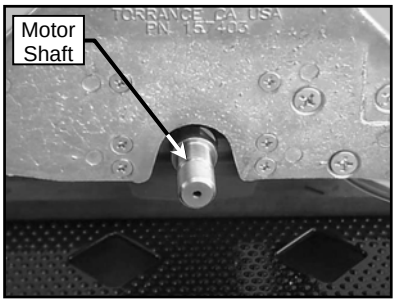
(K)
Clean the MK-170 with soap and clean water



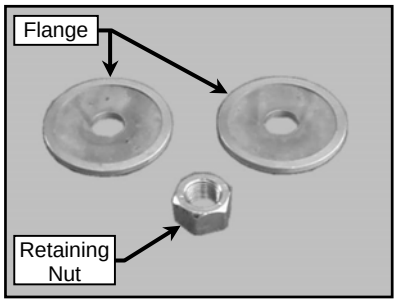
(L)
Clean the Water Pan

NOTE: To extend the life of the MK-170, lubricate the Motor Shaft with light oils such as, 3 in 1, WD-40, etc.

(M)
Clean the Cutting Table, Motor and Adjustable Cutting Guide



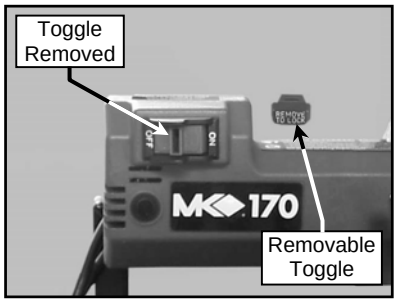
(N)
Monthly, remove the Blade then clean and lubricate the Motor Shaft



(O)
Clean the Inner and Outer Flanges and the Blade Retaining Nut

3. Lockout:

The MK-170 is provided with a Lockout device designed to prevent the operation of the saw when the owner is not around. This Lockout device is a Removable Toggle found on the "Rocker" of the ON/Off Switch. The Removable Toggle has the words "Remove To Lock" imprinted on the top.



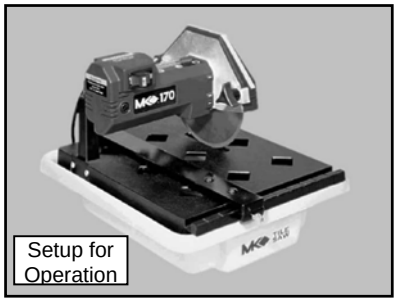
(A)
To Lockout the MK-170, remove the Toggle found on the "Rocker" of the ON/OFF Switch

MAINTENANCE AND TROUBLESHOOTING

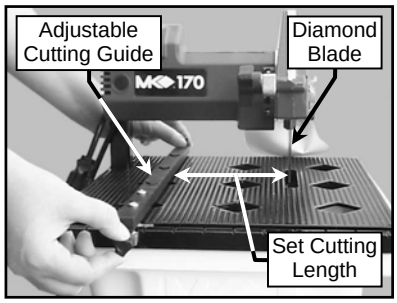
MAINTENANCE:

1. Blade Dressing:

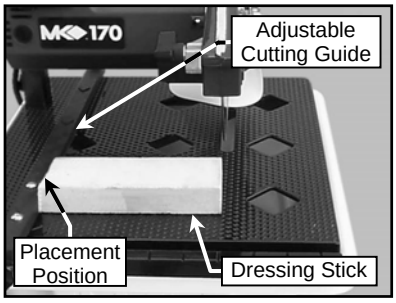
Like most cutting instruments, a diamond blade performs best when it is dressed. Over time and use, diamonds on the outer edge of the blade will become smoothed or "glazed" over. This will reduce grinding efficiency and may cause the blade to "wander" or bend giving the illusion of an alignment problem. When this occurs, the blade will need to be dressed. The diamond blade can be dressed using the MK Dressing Stick (part number 152972) and by following the steps below.



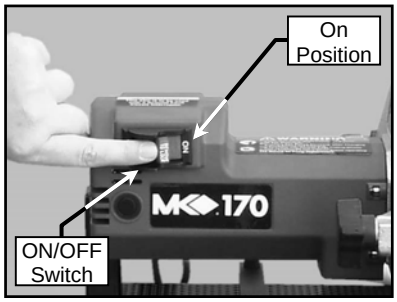
(A)
Setup the MK-170 for operation (See Setup, Adjustment and Operation)



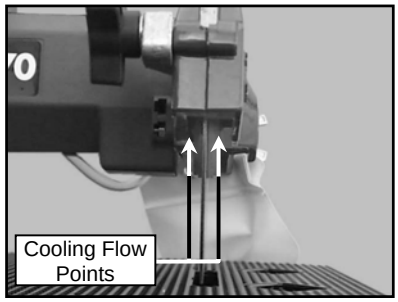
(B)
Set the Adjustable Cutting Guide to cut a 1/16-strip



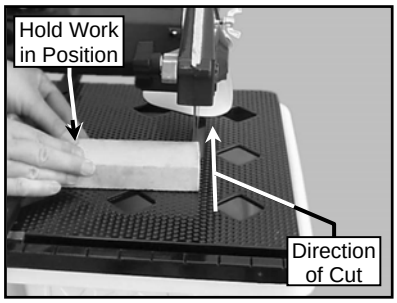
(C)
Position the Dressing Stick



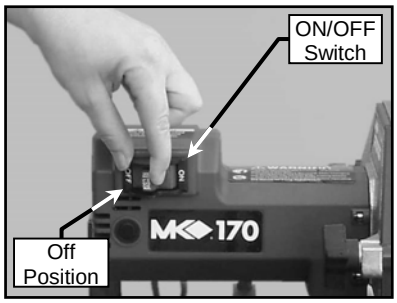
(C)
Place the ON/OFF Switch in the ON position



(D)
Verify cooling flow on both sides of the blade (adjust flow if necessary - See Maintenance Section)



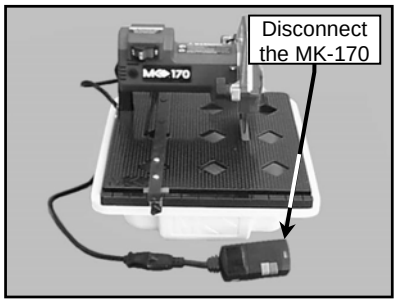
(E)
Push the Dressing Stick into the Blade in a smooth even motion to perform a cut, repeat 7 or 8 times to dress the Blade



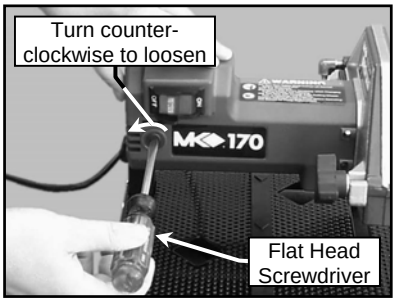
(F)
Turn the motor OFF when work is complete

7. Motor Brush Change-out:

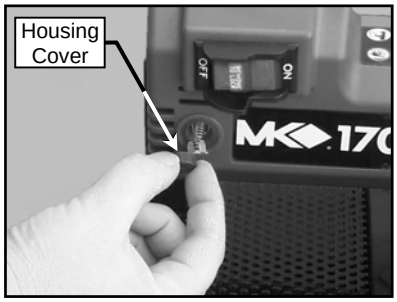
⚠WARNING Disconnect the tool before servicing and when changing accessories, such as blades, bits, cutters, and the like.



(A)
Disconnect the MK-170

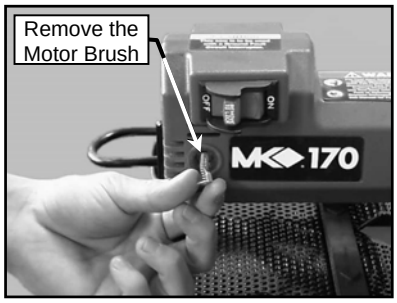


(B)
Locate and Remove One Motor Brush Cap using a Flat Head Screwdriver

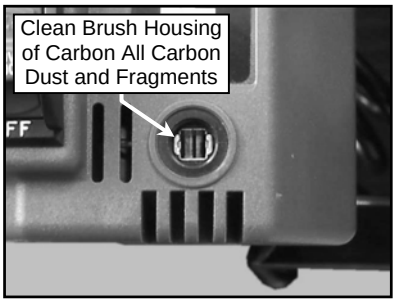


(C)
Remove Motor Brush Housing Cover

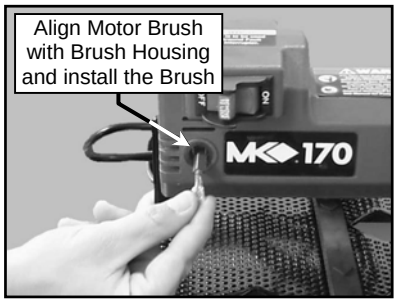
NOTE: When installing motor brushes, care must be taken to ensure the spring end is straight before installing the Motor Brush Cap.



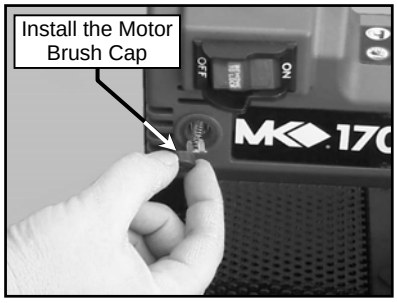
(D)
Align and Install New Motor Brush



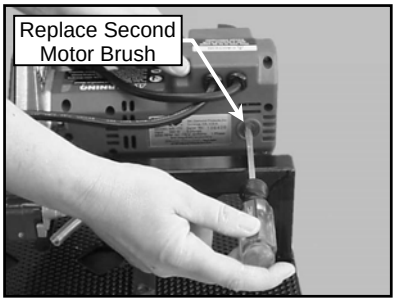
(E)
Clean the Motor Brush Housing using a Q-tip



(F)
Align and install the new Motor Brush



(G)
Install Motor Brush Cap and tighten using a Flat Head Screwdriver

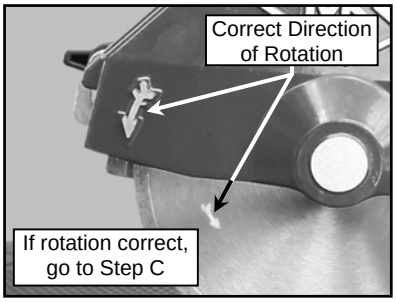


(H)
Install the Second Motor Brush (Repeat Steps B to E)

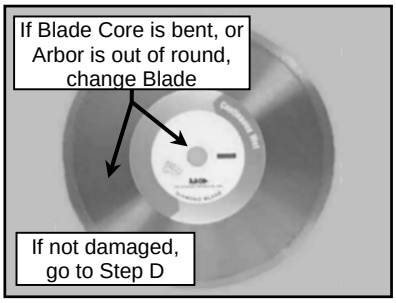
TROUBLESHOOTING:

1. Blade will not cut properly:

(A)
Check for Smoothness or "Glazing" (Dress blade if needed)



(B)
Check for proper rotation



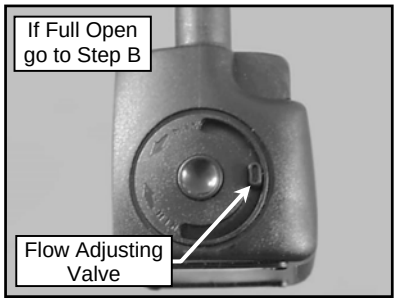
(C)
Ensure the Blade Core is not bent and Arbor is not out of round

(D)
Verify the blade is correct for the material being used

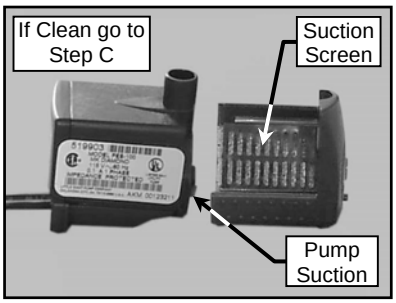
Return to MK Diamond for Repair

(E)
Return to MK Diamond

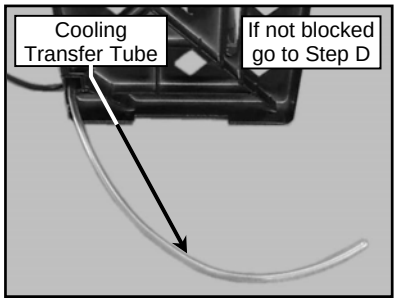
2. Cooling Flow:



(A)
Check that the Cooling Flow Adjusting Valve is FULL open

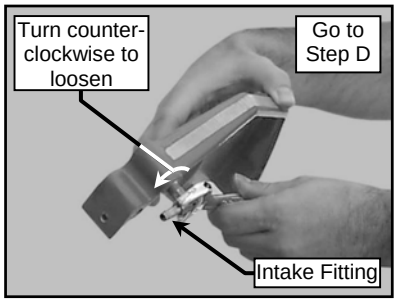


(B)
Remove the Cooling Transfer Tube from the Blade Guard inlet

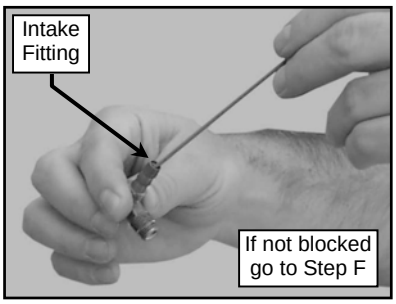


(C)
Inspect Cooling Transfer Tube for blockage

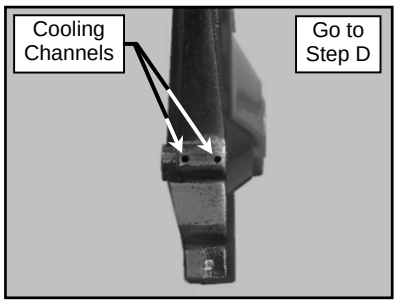
NOTE: "Rodding" cooling channels is performed by inserting a small wire rod through the cooling inlet on top of the Blade Guard and directing the rod out through each of the cooling flow tubes located on the underside o the Blade Guard. The cooling channels should be "rodded" until all ports are free of foreign debris.



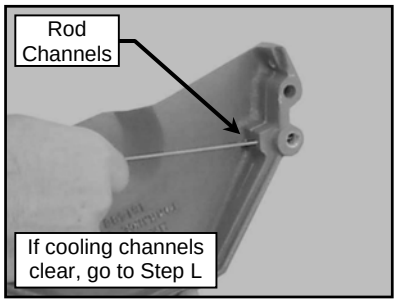
(D)
Remove the Blade Guard Intake Fitting



(E)
Clean the Blade Guard Intake Fitting



(F)
Locate the Blade Guard Cooling Channels

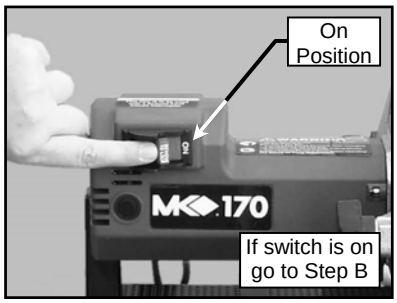


(G)
Rod Cooling Channels and recheck flow

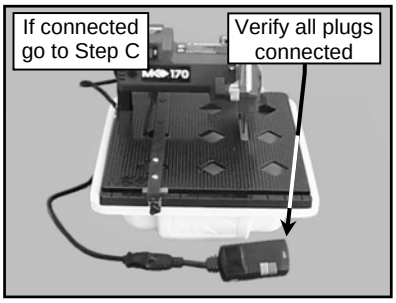
Return to MK Diamond for Repair

(L)
Return to MK Diamond

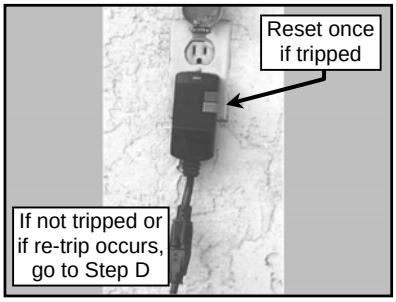
3. Blade Stops Turning:



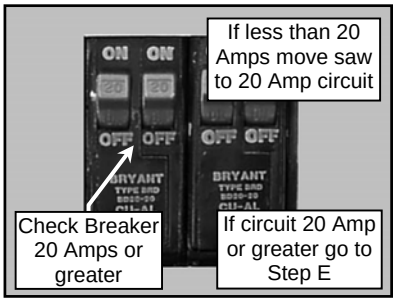
(A)
Check the ON/OFF Switch is in the ON position



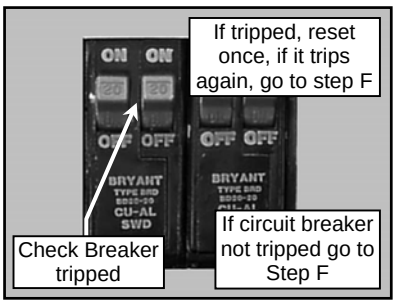
(B)
Verify all plugs are fully connected



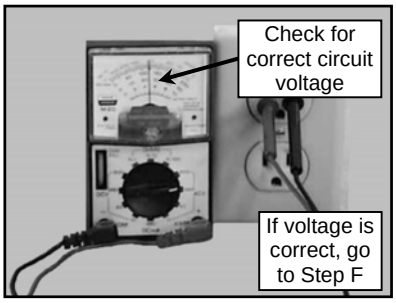
(C)
Check to see if the Ground Fault Circuit Interrupter (GFCI) tripped



(D)
Verify the circuit breaker is at least 20 amps – if not, move to 20-amp circuit



(E)
Verify circuit breaker not tripped; if it is tripped, reset it once only



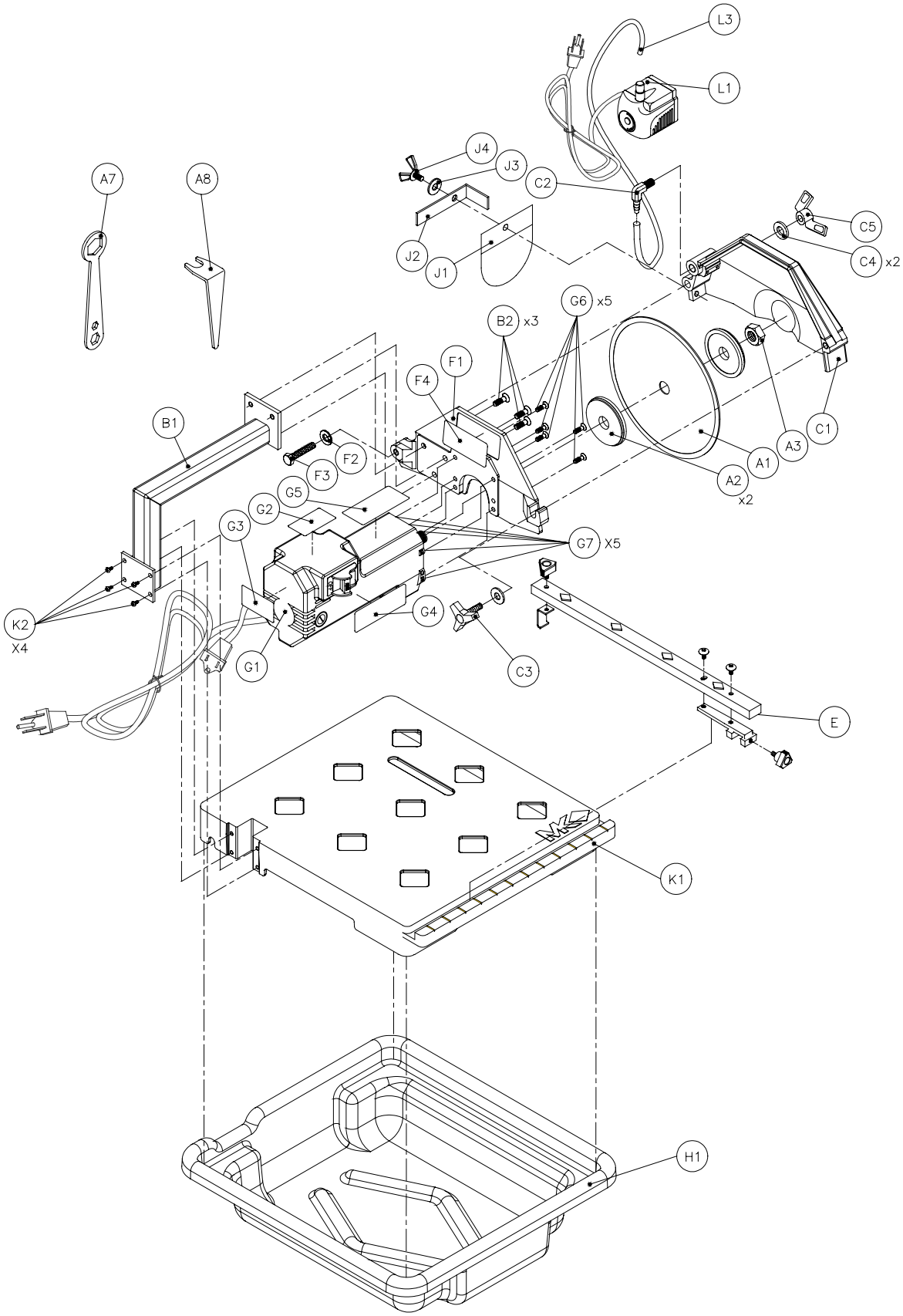
(F)
Check power source voltage is 115V – if not 115v, move to another circuit

Return to MK Diamond for Repair

(G)
Return to MK Diamond

EXPLODED VIEW AND PARTS LIST

EXPLODED VIEW:



EXPLODED VIEW AND PARTS LIST

PARTS LIST:

Item	Description	Qty	Part #
A	**Accessories, 170**	--	--
A1	Blade, 7 Dia x 5/8 Arbor MK-170	1	153441
A2	Flange, Blade	2	135830
A3	Nut, 5/8-18 UNF	1	135848
A4	Owner's Manual, 170	1	157243
A7	Wrench, Blade Nut, 15/16 Boxed End	1	134684
A8	Wrench, Blade Shaft, 11/16 Open End, 90☜	1	157244
B	**Arm, Motor Support**	--	--
B1	Arm, Motor Support	1	157245
B2	Screw, 1/4-20 x 1/2 Flat Head Phillips Cap	3	155812
C	**Assembly, Blade Guard, 7"**	1	154811-MK
C1	Guard, 7" Blade	1	154811
C2	Elbow, 1/8 MNPT x 1/4 BARB 90° Brass	1	154652
C3	Knob, Davies	1	151681
C4	Washer, 5/16 SAE Flat	2	151754
C5	Wing nut, 5/16-18 Nylock	1	151746
E	**Assembly, Fence, 170**	1	157406
E1	Fence, Upper	1	157247
E2	Fence, Lower	1	157248
E3	Screw, 10-24 x 3/8 Pan Head Phillips Machine	2	151097
E4	Knob, 1/4-20 x 3/4 Three Prong	1	157583-2
E5	Knob, 10-32 x 1/2 Three Prong	1	157583-1
E6	Clip, Fence	1	157559
F	**Motor Mount**	--	--
F1	Motor Mount	1	157403
F2	Washer, 5/16 Split Lock	1	151747
F3	Screw, 5/16-18 x 2 1/2 Hex Head Cap, Full Thread	1	151748
F4	Tag, Serial Number, UL Mark	1	157249-02
G	**Motor, 120v/4.7a, 170**	--	--
G1	Motor, 120v/4.7a, 170	1	157226
G2	Label, Caution, GFCI, 1 x 2 1/8	1	155678
G3	Label, Caution, Receptacle, 1 x 2 1/8	1	154822
G4	Label, Motor, 170	1	157251
G5	Label, Warning, Read Owner's Manual	1	155806
G6	Screw, M5-.8 x 20mm Flat Head Phillips Machine	5	157404
G7	Nut, M5-.8 Hex	5	157405
H	**Pan, Water, 170**	--	--
H1	Pan, Water, 170	1	157252
J	**Splash Curtain**	--	--
J1	Curtain, Splash	1	134841
J2	Bracket, Splash Curtain	1	155901
J3	Washer, 1/4 SAE Flat	1	151915
J4	Wing-screw, 1/4-20 x 1/2	1	151888

EXPLODED VIEW AND PARTS LIST

Item	Description	Qty	Part #
K	**Table, 170**	--	--
K1	Table, 170	1	157253
K2	Screw, 10-24 x 1/2 Pan Head Phillips Machine	4	151744
L	**Water Pump, PES-100 120v**	--	--
L1	Pump, Water, PES-100 120v	1	155987
L3	Hose, Vinyl, 1/4 ID	34”	132951
L4	Owner’s Manual, Water Pump	1	155745

THEORY

THEORY OF DIAMOND BLADES:

Diamond blades do not really cut; they grind the material through friction. Diamond crystals, often visible at the leading edge and sides of the rim/segment, remove material by scratching out particles of hard, dense materials, or by knocking out larger particles of loosely bonded abrasive material. This process eventually cracks or fractures the diamond particle, breaking it down into smaller pieces. As a result, a diamond blade for cutting soft, abrasive material must have a hard metal matrix composition to resist this erosion long enough for the exposed diamonds to be properly utilized. Conversely, a blade for cutting a hard, non-abrasive material must have a soft bond to ensure that it will erode and expose the diamonds embedded in the matrix. These simple principles are the foundation of “controlled bond erosion”.

Types of Cutting:

There are two basic types of cutting-Dry or Wet. The choice of which type of blade to use depends on:

- The requirements of the job
- The machine/tool utilizing the diamond blade
- The preference of the operator

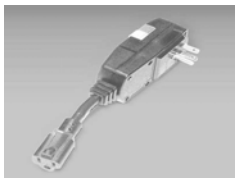
In the case of DRY cutting, the overwhelming popularity and quantity of hand-held saws and the flexible nature of MK Diamond blades to professionally handle most ceramic, masonry, stone and concrete materials, make the DRY cutting blade a very attractive tool. When using a DRY blade, the user must be aware of distinct operating practices to ensure optimum performance. DRY cutting blades require sufficient airflow about the blade to prevent overheating of the steel core. This is best accomplished by shallow, intermittent cuts of the material with periods of “free-spinning” (for several seconds) between each cut, to maximize the cooling process.

For WET cutting applications, MK has the exact blade to compliment both the material to be cut and the wet cutting machine to be used. During cutting operations, liberal amounts of water act as a coolant to support the cutting effectiveness and longevity of the WET blade. Additionally, using water adds to the overall safety of cutting operations by keeping the dust signature down.

Know All You Can About the Material You Wish to Cut

ACCESSORIES

ACCESSORIES:

ITEM	NUMBER	DESCRIPTION	
1.	139295	MK-200, 7 x 5/8 Arbor	
2.	139311	MK-215, 7 x 5/8 Arbor	
3.	153293	MK-315, 10 x 5/8 Arbor	
4.	152610	Ground Fault Circuit Interrupter	
5.	153567	Foot Switch	
6.	152792	Dressing Stone	
7.	2-Pack 133025-MK 6-Pack 151431-MK	Drain Plugs	

ORDERING and RETURN INFORMATION

ORDERING INFORMATION:

You may order MK Diamond products through your local MK Diamond distributor or, you may order direct from MK Diamond.

NOTE: There is a $25.00 minimum order when ordering direct from MK Diamond. All purchases must be made using VISA or MasterCard.

When ordering direct from MK Diamond, please have the following information ready before calling:
- The Model Number of the saw
- The Serial Number of the saw
- Where the saw was purchased and when
- The Part Number for the part(s) being ordered
- The Part Description for the part(s) being ordered

All parts may be ordered by calling toll free to – **800 421-5830** or **310 539-5221** and asking for Customer Service. For technical questions, call – **800 474-5594**.

RETURN MATERIALS POLICY:

To expedite the service relative to the return of a product purchased through MK Diamond, please observe the following:

NOTE: When returning all items, they must have been purchased within the previous twelve (12) months.
- Have the Model Number of the saw
- Have the Serial Number of the saw
- Have the location of where the saw was purchased
- Have the date when the saw was purchased
- Contact Customer Service for approval to return the item(s)
- Obtain a Returned Goods Number (RGA) authorizing the return
- Follow the packaging instructions in the following section
- Ensure your item(s) are prepaid to the destination

For returned items, call toll free to – **800 421-5830** or **310 539-5221** and ask for Customer Service. For technical questions, call – **800 474-5594** or **310 257-2845**.

PACKAGING INSTRUCTIONS:

- Remove the Blade guard and Support Angle Assembly
- Dry the saw before shipping
- When packing, include the following: MK-170, Diamond Blade, Blade guard and Support Angle Assembly and Adjustable Cutting Guide (Other Accessories are not required)
- Package the unit in its original container or one of comparable size (do not ship the unit partially exposed)
- Ensure all parts are secured in the packaging to prevent moving

AUTHORIZED SERVICE CENTERS:

For quicker repair time, you may contact MK Diamond Customer Service, toll free, at – **800 421-5830** or **310 539-5221** for the Authorized Service Center closest too you. For technical questions, call – **800 474-5594**.

MK-170 SERIES

TILE SAW
OWNER'S MANUAL &
OPERATING INSTRUCTIONS

CALIFORNIA PROPOSITION 65 MESSAGE:

⚠WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contain chemicals known [to the State of California] to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead, from lead-based paints
- Crystalline silica, from bricks and cement and other masonry products and
- Arsenic and chromium, from chemically treated lumber

Your risk from these exposures varies depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

MK DIAMOND PRODUCTS, INC
1315 STORM PARKWAY, TORRANCE, CA 90509-2803
310 539 5158